

# Memorandum

Date : December 11, 2001

Telephone: (916) 654-3999

File: Avenal Energy Project

To: William J. Keese, Chairman  
Michal C. Moore, Ph.D  
Robert A. Laurie  
Robert Pernell  
Arthur H. Rosenfeld, Ph.D

From: California Energy Commission -  
1516 Ninth Street  
Sacramento, CA 95814-5512

Steve Larson  
Executive Director

Subject: **AVENAL ENERGY SECOND DATA ADEQUACY RECOMMENDATION (01-AFC-20)**

On October 9, 2001, Duke Energy Avenal, LLC (Duke Avenal) filed an Application for Certification (AFC) seeking approval from the California Energy Commission to construct and operate a nominal 600 MW power plant called the Avenal Energy Project (AEP). At the November 14, 2001 Business Meeting, the Energy Commission found that the AFC did not contain sufficient information to constitute a complete application. Staff has reviewed supplemental information provided by Duke Energy on December 7, 2001. Based on staff's analysis, the AFC now meets the requirements of California Code of Regulations, Title 20, Section 1704, Appendix B, for the 12-month AFC. Staff therefore recommends that the Energy Commission find the AFC adequate.

Attachment A contains an overview of the eight technical disciplines that were previously found to be inadequate. Attachment B contains staff's detailed data adequacy worksheets that describe staff's findings for each information requirement in the eight technical areas.

At the Energy Commission's business meeting on December 19, 2001, I will be recommending that the Energy Commission accept the AFC as data adequate, pursuant to California Code of Regulations, Title 20, Section 1709. I will also recommend that the Energy Commission assign a Committee to the Avenal Siting Case for the 12-month review process.

If you have any questions, please call Jim McKinney, Energy Commission's Project Manager, at (916) 654-3999.

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STEVE LARSON  
Executive Director

SL:JM

Attachments

cc: Mr. Robert Cochran  
Project Manager  
Duke's Avenal Energy Project

**ATTACHMENT A**  
**OVERVIEW OF ENERGY COMMISSION STAFF'S**  
**DATA ADEQUACY DETERMINATION**  
**Avenal Energy Project**  
**01-AFC-20**

<b>TECHNICAL AREA</b>	<b>ATTACHMENT PAGE NO.</b>	<b>ADEQUATE?</b>
<b>Air Quality</b>	<b>1</b>	<b>Yes</b>
<b>Cultural Resources</b>	<b>6</b>	<b>Yes</b>
<b>Land Use</b>	<b>9</b>	<b>Yes</b>
<b>Noise</b>	<b>13</b>	<b>Yes</b>
<b>Public Health</b>	<b>16</b>	<b>Yes</b>
<b>Transmission System Engineering</b>	<b>18</b>	<b>Yes</b>
<b>Visual Resources</b>	<b>21</b>	<b>Yes</b>
<b>Water Resources</b>	<b>24</b>	<b>Yes</b>

## **ATTACHMENT B**

### **ENERGY COMMISSION STAFF'S List of Data Inadequacies**

#### **Avenal Energy Project 01-AFC-20**

December 11, 2001

Adequacy Issue: Adequate ☒ Inadequate ☒

## DATA ADEQUACY WORKSHEET

Revision No. 01 Date 40/49/04 12/05/01

Technical Area: Air Quality Project: Avenal Energy Project Technical Staff: Brewster Birdsall/ Will Walters  
 Project Manager: Jim McKinney Docket: 01-AFC-20 Technical Senior: Matt Layton

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	§6.2.1 Pages 6.2-1 to 6.2-3 §6.2.5.1 Pages 6.2-27 to 6.2-50 §6.2.5.4 Pages 6.2-52 to 6.2-53 Appendix 6.2-4 Page 6.2-4.2 §6.2.8 Page 6.2-62	Yes	
Appendix B (g) (8) (A)	The information necessary for the air pollution control district where the project is located to complete a Determination of Compliance.	N/A	No Yes	<del>According to the Applicant's contractor, Sierra Research, the application was filed 10/15/01. According to Rule 2201.5.8.3, the SJVAPCD will determine completeness of the AFC within 20 days of receipt of the application.</del>  On 12/05/01, the CEC received the notice of a complete application issued by the San Joaquin Valley Air Pollution Control District.
Appendix B (g) (8) (B)	The heating value and chemical characteristics of the proposed fuels, the stack height and diameter, the exhaust velocity and temperature, the heat rate and the expected capacity factor of the proposed facility.	§6.2.5.1.1 Table 6.2-15, Page 6.2-28 Appendix 6.2-2 Table 6.2-2.2, Page 6.2-2.3 Appendix 6.2-1, Table 6.2-1.1 §6.2.5.1.2 Table 6.2-24, Page 6.2-43 §1.6, Page 1-15	Yes	
Appendix B (g) (8) (C)	A description of the control technologies proposed to limit the emission of criteria pollutants.	§1.8.1, Page 1-17 Appendix 6.2-5 Tables 6.2-5.5 and 6.2-5.6 §6.2.6.3, Pages 6.2-56 to 6.2-58	Yes	

Adequacy Issue: Adequate **x** Inadequate **x**

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Will Walters  
Project Manager: Jim McKinney Docket: 01-AFC-20 Technical Senior: Matt Layton

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (8) (D)	A description of the cooling system, the estimated cooling tower drift rate, the rate of water flow through the cooling tower, and the maximum concentrations of total dissolved solids.	§2.3.6.4, Pages 2-38 to 2-39 Appendix 6.2-1 Table 6.2-1.3, Page 6.2-1.3	Yes	
Appendix B (g) (8) (E)	The emission rates of criteria pollutants from the stack, cooling towers, fuels and materials handling processes, delivery and storage systems, and from all secondary emission sources.	Table 6.2-21, Page 6.2-32	No Yes	<del>An estimate of criteria pollutant emissions from secondary sources (e.g., ammonia delivery or other routine deliveries, etc.)</del> Information provided in Duke's Draft DA submittal (11/20) is adequate.
Appendix B (g) (8) (F)	A description of typical operational modes, and start-up and shutdown modes for the proposed project, including the estimated frequency of occurrence and duration of each mode, and estimated emission rate for each criteria pollutant during each mode.	Tables 6.2-16 to 6.2-20, Pages 6.2-28 to 6.2-32 Appendix 6.2, Table 6.2-1.1	Yes	
Appendix B (g) (8) (G)	The ambient concentrations of all criteria pollutants for the previous three years as measured at the three Air Resources Board certified monitoring stations located closest to the project site, and an analysis of whether this data is representative of conditions at the project site. The applicant may substitute an explanation as to why information from one, two, or all stations is either not available or unnecessary.	§§6.2.3.1 to 6.2.3.7 Tables 6.2-2 to 6.2-9 Pages 6.2-6 to 6.2-13	Yes	
Appendix B (g) (8) (H)	One year of meteorological data collected from either the Federal Aviation Administration Class 1 station nearest to the project or from the project site, or meteorological data approved by the California Air Resources Board or the local air pollution control district.	Electronic Submittal on CD-R. §6.2.5.1.2, Page 6.2-37	Yes	

Adequacy Issue: Adequate **x** Inadequate **x**

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Appendix B (g) (8) (H) (i)	If the data is collected from the project site, the applicant shall demonstrate compliance with the requirements of the U.S. Environmental Protection Agency document entitled "On-Site Meteorological Program Guidance for Regulatory Modeling Applications" (EPA - 450/4-87-013 (August 1995), which is incorporated by reference in its entirety.)	N/A	N/A	
Appendix B (g) (8) (H) (ii)	The data shall include quarterly wind tables and wind roses, ambient temperatures, relative humidity, stability and mixing heights, upper atmospheric air data, and an analysis of whether this data is representative of conditions at the project site.	Electronic Submittal on CD-R. Figures 6.2-1 to 6.2-5e Pages 6.2-64 to 6.2-74	Yes	
Appendix B (g) (8) (I)	An evaluation of the project's direct and cumulative air quality impacts, consisting of the following:			
Appendix B (g) (8) (I) (i)	A screening level air quality modeling analysis, or a more detailed modeling analysis if so desired by the applicant, of the direct inert pollutant impacts of project construction activities on ambient air quality conditions, including fugitive dust (PM <sub>10</sub> ) emissions from grading, excavation and site disturbance, as well as the combustion emissions [nitrogen oxides (NO <sub>x</sub> ), sulfur dioxide (SO <sub>2</sub> ), carbon monoxide (CO), and particulate matter less than 10 microns in diameter (PM <sub>10</sub> )] from construction-related equipment;	Electronic Submittal on CD-R. Appendix 6.2-4 §6.2.5.4, Pages 6.2-52 to 6.2-53	Yes	

Adequacy Issue: Adequate **x** Inadequate **x**

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Will Walters  
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SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (8) (I) (ii)	A screening level air quality modeling analysis, or a more detailed modeling analysis if so desired by the applicant, of the direct inert criteria pollutant (NO <sub>x</sub> , SO <sub>2</sub> , CO and PM <sub>10</sub> ) impacts on ambient air quality conditions of the project during typical (normal) operation, and during shutdown and startup modes of operation. Identify and include in the modeling of each operating mode the estimated maximum emissions rates and the assumed meteorological conditions; and	Electronic Submittal on CD-R. Appendix 6.2-1 and 6.2-2 Table 6.2-2.2 §6.2.5.1.2 Tables 6.2-23 and 6.2-24 Pages 6.2-40 to 6.2-44	Yes	
Appendix B (g) (8) (I) (iii)	A protocol for a cumulative air quality modeling impacts analysis of the project's typical operating mode in combination with other stationary emissions sources within a six mile radius which have received construction permits but are not yet operational, or are in the permitting process. The cumulative inert pollutant impact analysis should assess whether estimated emissions concentrations will cause or contribute to a violation of any ambient air quality standard.	§6.1.4, Table 6.1-1, p 6.1-5 Appendix 6.2-7, Page 6.2-7.2	Yes	
Appendix B (g) (8) (J)	If an emission offset strategy is proposed to mitigate the project's impacts under subsection (g)(1), provide the following information:			
Appendix B (g) (8) (J) (i)	The quantity of offsets needed;	Tables 6.2-35 to 6.2-36 Pages 6.2-58 to 6.2-60	Yes	
Appendix B (g) (8) (J) (ii)	Potential offset sources, including location, and quantity of emission reductions; and	Table 6.2-36, Page 6.2-59 Appendix 6.2-6, Page 6.2-6.1 Confidential Filing to CEC.	Yes	
Appendix B (g) (8) (J) (iii)	Method of emission reduction.	Table 6.2-36, Page 6.2-59 Appendix 6.2-6, Page 6.2-6.1 Confidential Filing to CEC.	Yes	



Adequacy Issue: Adequate **x** Inadequate **x**

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Will Walters  
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Appendix B (g) (8) (K)	A topographic map containing contour and elevation data, at a scale of 1:24,000, showing the area within 6 miles of the power plant site.	Submitted on USGS 7.5 minute quadrangles.	Yes	
Appendix B (h) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, and permits applicable to the proposed project, and a discussion of the applicability of each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed;	Table 6.2-14 Pages 6.2-25 and 6.2-26 §6.2.6, Pages 6.2-53 to 6.2-61	Yes	
Appendix B (h) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	Table 6.2-10, Page 6.2-14 Table 6.2-14 Pages 6.2-25 and 6.2-26	Yes	
Appendix B (h) (2)	A discussion of the conformity of the project with the requirements listed in subsection (h)(1)(A).	§6.2.6, Pages 6.2-53 to 6.2-61	Yes	
Appendix B (h) (3)	The name, title, phone number, and address, if known, of an official within each agency who will serve as a contact person for the agency.	Table 6.2-10, Page 6.2-14	Yes	
Appendix B (h) (4)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.	Not found.	<del>No</del> Yes	<del>Schedule for PDOC/FDOC and PSD permit approval and steps taken to obtain permits.</del> Information provided in Duke's Draft DA submittal (11/20) is adequate.

Adequacy Issue: Adequate **X** Inadequate **X**

## DATA ADEQUACY WORKSHEET

Revision No. 1 Date 40/22/0411/29/01

Technical Area: **Cultural Resources**

Project: Duke Avenal

Technical Staff: Paul Shattuck/Gary Reinoehl

Project Manager: Jim McKinney

Docket: 01-AFC-20

Technical Senior: Dale Edwards

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	AFC Vol. 1, Page 6.7-2 AFC Vol. 1, Page 6.7-10 to 12	Yes	
Appendix B (g) (2) (A)	A brief summary of the ethnology, prehistory, and history of the region in which the project site and related facilities are located and maps at a scale of 1:24,000, indicating areas of ethnographic occupation. The region may vary depending on the extent of the territory occupied or used by prehistoric cultures indigenous to the area in which the project is located.	AFC Vol. 1, Page 6.7-4 AFC Vol. 1, Figure 6.7-1, p. 6-7-3	Yes	
Appendix B (g) (2) (B)	A description of all literature searches and field surveys used to provide information about known cultural resources in the project vicinity. If survey records of the area potentially physically affected by the project are not available, and the area has the potential for containing significant cultural resources, the applicant shall submit a new or revised survey for any portion of the area lacking comprehensive survey data. A discussion of the dates of the surveys, methods used in completing the surveys, and the identification and qualification of the individuals conducting the surveys shall be included.	AFC Vol. 1, Page 6.7-2 AFC Vol. 2., Appendix 6.7-1, Page 13-15 AFC Vol. 1, Page 6.7-2 and 6.7-4	No Yes	<del>Please provide a technical report detailing the the findings of field surveys covering both archaeological issues and elements of the built environment.</del>

Adequacy Issue: Adequate **X** Inadequate **X**

## DATA ADEQUACY WORKSHEET

Revision No. 1 Date 40/22/0411/29/01

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Project: Duke Avenal

Technical Staff: Paul Shattuck/Gary Reinoehl

Project Manager: Jim McKinney

Docket: 01-AFC-20

Technical Senior: Dale Edwards

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (2) (C)	A discussion of the sensitivity of the project area described in subsection (g)(2)(A) and the presence and significance of any known archeological sites and other cultural resources that may be affected by the project. Information on the specific location of archeological resources shall be included in a separate appendix to the application and submitted to the Commission under a request for confidentiality pursuant to Title 20, California Code of Regulations, § 2501 et seq.	AFC Vol. 1, Page 6.7-8	Yes	
Appendix B (g) (2) (D)	A summary of contacts and communications with, and responses from, Native American representatives who may have an interest in heritage lands and/or resources potentially affected by the proposed project.	AFC Vol. 2, Appendix 6.7-1, Appendix A	Yes	
Appendix B (g) (2) (E)	In the discussion on mitigation and monitoring prepared pursuant to subsection (g)(1), a discussion of any educational programs proposed to enhance awareness of potential impacts to archeological resources by employees and contractors, measures proposed for mitigation of impacts to known cultural resources, and a set of contingency measures for mitigation of potential impacts to previously unknown cultural resources.	AFC Vol. 1, Page 6.7-10 & 11 Data Adequacy Letter, Nov. 6, 2001 Page 3-4	No Yes	<del>Please provide a detailed summary of the education program that will be used to enhance awareness of employees and contractors.</del>
Appendix B (h) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, and permits applicable to the proposed project, and a discussion of the applicability of each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed;	AFC Vol. 1, Table 6.7-1, Page 6.7-13 to 15	Yes	

Adequacy Issue: Adequate **X** Inadequate **X**

## DATA ADEQUACY WORKSHEET

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Project: Duke Avenal

Technical Staff: Paul Shattuck/Gary Reinoehl

Project Manager: Jim McKinney

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Appendix B (h) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	AFC Vol. 1, Table 6.7-2, Page 6.7-16	Yes	
Appendix B (h) (2)	A discussion of the conformity of the project with the requirements listed in subsection (h)(1)(A).	AFC Vol. 2, Appendix 6.7-1 Page 3 to 6	Yes	
Appendix B (h) (3)	The name, title, phone number, and address, if known, of an official within each agency who will serve as a contact person for the agency.	AFC Vol. 1, Table 6.7-2, Page 6.7-16	Yes	
Appendix B (h) (4)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.	AFC Vol. 1, Page 6.7-12	Yes	

Adequacy Issue: Adequate **X** Inadequate **X**

## DATA ADEQUACY WORKSHEET

Revision No. 01 Date **October 22, 2004**  
**November 30, 2001**

Technical Area: **Land Use**

Project: **Avenal Energy**

Technical Staff: **Tamblyn Borton**

Project Manager: **Jim McKinney**

Docket: **01-AFC-20**

Technical Senior: **Eileen Allen**

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	Section 6.9 Entire contents	Yes	
Appendix B (g) (3) (A)	A discussion of existing land uses and current zoning at the site, land uses and land use patterns within one mile of the proposed site and within one-quarter mile of any project-related linear facilities. Include:	Section 6.9.1.2 Pages 6.9-7 through 6.9-8	Yes	
Appendix B (g) (3) (A) (i)	An identification of residential, commercial, industrial, recreational, scenic, agricultural, natural resource protection, natural resource extraction, educational, religious, cultural, and historic areas, and any other area of unique land uses;	Section 6.9.1.1, Section 6.9.1.2 Pages 6.9-1 through 6.9-8	Yes	
Appendix B (g) (3) (A) (ii)	A discussion of any trends in recent zoning changes and potential future land use development;	Section 6.9.2 Pages 6.9-8	Yes	
Appendix B (g) (3) (A) (iii)	Identification of all discretionary reviews by public agencies initiated or completed within 18 months prior to filing the application for those changes or developments identified in subsection (g)(3)(A)(ii); and	Section 6.9.2 Pages 6.9-8	Yes	
Appendix B (g) (3) (A) iv)	Legible maps of the areas identified in subsection (g)(3)(A) potentially affected by the project, on which existing land uses, jurisdictional boundaries, general plan designations, specific plan designations, and zoning have been clearly delineated.	Figure 6.9-3 Pages 6.9-5	NoYes	<del>Map identifies Kings County and Fresno County as agricultural, but does not delineate these designations on the map.</del>  <del>Please provide Kings and Fresno County general plan and zoning information on the map.</del>

Adequacy Issue: Adequate **X** Inadequate **X**

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Project: **Avenal Energy**

Technical Staff: **Tamblyn Borton**

Project Manager: **Jim McKinney**

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SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (3) (B)	A discussion of the compatibility of the proposed facilities with present and expected land uses, and conformity with any long-range land use plans adopted by any federal, state, regional, or local planning agency. The discussion shall identify the need, if any, for variances or any measures that would be necessary to make the proposal conform with permitted land uses	Section 6.9 Page 6.9-1 Section 6.9.2 Pages 6.9-8 through 6.9-17	Yes	
Appendix B (g) (15) (B)	A map at a scale of 1:24,000 and written description of agricultural land uses found within all areas affected by the proposed project. The description shall include:	Fig 6.9-2, Page 6.9-3 Section 6.9.1, Section 6.9.2 Pages 6.9-1 through 6.9-8	Yes	
Appendix B (g) (15) (B) (i)	Crop types, irrigation systems, and any special cultivation practices; and	Section 6.9.1.1, Section 6.9.1.2 Pages 6.9-1 through 6.9-8	Yes	
Appendix B (g) (15) (B) (ii)	Whether farmland affected by the project is prime, of statewide importance, or unique as defined by the Natural Resource Conservation Service through the California Department of Conservation.	Section 6.4., Pages 6.4-2, 6.4-5	Yes	
Appendix B (g) (15) (C)	An assessment of the effects of the proposed project on soil resources and agricultural land uses. This decision shall include:	Section 6.4, Pages 6.4-1 through 6.4-13	Yes	

Adequacy Issue: Adequate **X** Inadequate **X**

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Project: **Avenal Energy**

Technical Staff: **Tamblyn Borton**

Project Manager: **Jim McKinney**

Docket: **01-AFC-20**

Technical Senior: **Eileen Allen**

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (15) (C) (ii)	Direct and indirect effects on agricultural land uses; and	Section 6.9.3.3, Pages 6.9-18 through 6.9-21, Section 6.9.3.4, Pages 6.9-21 through 6.9-23. Section 6.9.3.5, Page 6.9-23  Section 6.4, Pages 6.4-5 through 6.4-15	NoYes	<del>Current maps maintained by the California Department of Conservation indicate that the project site is classified as Prime Farmland.</del>  <del>The project may result in the cumulative loss of Prime Farmland in the state, and may have growth inducing indirect effects. The project may have potential impacts that "are individually limited, but cumulatively considerable", which need to be addressed as a potentially significant impact.</del>  <del>Please discuss the project's cumulative impact, with respect to Prime Farmland conversion.</del>  <del>These potential impacts and corresponding mitigation options may have been addressed by the City of Avenal in 1992, when considering the rezoning to industrial. However, the Prime Farmland impact, and the City of Avenal's CEQA response to the impact during the General Plan/rezoning process are not identified in the text discussion of cumulative impacts.</del>  <del>Please summarize the City's response to the potential impacts on Prime Farmland resulting from the 1992 rezoning action.</del>
Appendix B (h) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, and permits applicable to the proposed project, and a discussion of the applicability of each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed;	Table 6.9-2, Pages 6.9-11 through 15	Yes	

Adequacy Issue: Adequate **X** Inadequate **X**

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Appendix B (h) (2)	A discussion of the conformity of the project with the requirements listed in subsection (h)(1)(A).	Section 6.9.2 Pages 6.9-8 through 6.9-17	Yes	
Appendix B (h) (3)	The name, title, phone number, and address, if known, of an official within each agency who will serve as a contact person for the agency.	Table 6.9-3, Page 6.9-17	Yes	
Appendix B (h) (4)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.	Section 6.9.2.6 Page 6.9-17	Yes	



Adequacy Issue: Adequate **X** Inadequate **X**

# DATA ADEQUACY WORKSHEET

Revision No. 01 Date October 16, 2001  
0 November 26, 2001

Technical Area: **Noise**

Project: Avenal Energy Project

Technical Staff: Lynn Alexander

Project Manager: Jim McKinney

Docket: 01-AFC-20

Technical Senior: Bill Thiessen

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	AFC Page 6.12-1	Yes	
Appendix B (g) (4) (A)	A land use map which identifies residences, hospitals, libraries, schools, places of worship, or other facilities where quiet is an important attribute of the environment within the area impacted by the proposed project. The area impacted by the proposed project is that area where there is a potential increase of 5 dB(A) or more, during either construction or operation, over existing background levels.	AFC Page 6-12-9	Yes	
Appendix B (g) (4) (B)	A description of the ambient noise levels at those sites identified under subsection (g)(4)(A) which the applicant believes provide a representative characterization of the ambient noise levels in the project vicinity, and a discussion of the general atmospheric conditions, including temperature, humidity, and the presence of wind and rain at the time of the measurements. The existing noise levels shall be determined by taking noise measurements for a minimum of 25 consecutive hours at a minimum of one site. Other sites may be monitored for duration at the applicant's discretion during the same 25-hour period. The results of the noise level measurements shall be reported in Leq (equivalent sound or noise level), Ldn (day-night sound or noise level) or CNEL (Community Noise Equivalent Level) in units of dB(A). The L10, L50, and L90 values (noise levels exceeded 10 percent, 50 percent, and 90 percent of the time, respectively) shall also be reported.	AFC Page 6.12-8 thru p. 6.12-12  November 26, 2001 Responses to Data Adequacy Comments p. 8-10	NoYes	<del>A minimum 25-hour background noise level measurement should be conducted at the critical residence northeast of the project site. The data provided should include the hourly <math>L_{eq}</math>, <math>L_{10}</math>, <math>L_{50}</math> and <math>L_{90}</math> values, and the <math>L_{dn}</math>. The short-term measurements taken at this site are described as "consistent with the <math>L_{90}</math> statistical level."</del> However, it appears that exact $L_{90}$ measurements were not conducted. Since background noise levels are very low at this remotely located residence, there is a possibility that project noise levels could exceed background $L_{90}$ levels at this location by 5 dBA during the nighttime hours. Continuous hourly measurements that report exact $L_{90}$ values are needed to clarify the relationship of nighttime background noise levels to project noise levels.

Adequacy Issue: Adequate **X** Inadequate **X**

# DATA ADEQUACY WORKSHEET

Revision No. 01  
0 Date ~~October 16, 2001~~  
November 26, 2001

Technical Area: **Noise**

Project: Avenal Energy Project

Technical Staff: Lynn Alexander

Project Manager: Jim McKinney

Docket: 01-AFC-20

Technical Senior: Bill Thiessen

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (4) (C)	A description of the major noise sources of the project, including the range of noise levels and the tonal and frequency characteristics of the noise emitted.	AFC Pages 6.12-29 thru 6.12-27 & Appendix 6-12-1	Yes	
Appendix B (g) (4) (D)	An estimate of the project noise levels, during both construction and operation, at residences, hospitals, libraries, schools, places of worship or other facilities where quiet is an important attribute of the environment, within the area impacted by the proposed project.	AFC Pages 6.12-31 thru 6.12-38	Yes	
Appendix B (g) (4) (E)	An estimate of the project noise levels within the project site boundary during both construction and operation and the impact to the workers at the site due to the estimated noise levels.	AFC Pages 6.12-39 - 6.12-40	Yes	
Appendix B (g) (4) (F)	The audible noise from existing switchyards and overhead transmission lines that would be affected by the project and estimates of the future audible noise levels that would result from existing and proposed switchyards and transmission lines. Noise levels shall be calculated at the property boundary for switchyards and at the edge of the rights-of-way for transmission lines.	AFC Page 6.12-40	Yes	
Appendix B (h) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, and permits applicable to the proposed project, and a discussion of the applicability of each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed;	AFC Page 6-12-42	Yes	

Adequacy Issue: Adequate **X** Inadequate **X**

# DATA ADEQUACY WORKSHEET

Revision No. 01 Date ~~October 16, 2001~~  
 0 November 26, 2001

Technical Area: **Noise**

Project: Avenal Energy Project

Technical Staff: Lynn Alexander

Project Manager: Jim McKinney

Docket: 01-AFC-20

Technical Senior: Bill Thiessen

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (h) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	AFC Page 6.12-43	Yes	
Appendix B (h) (2)	A discussion of the conformity of the project with the requirements listed in subsection (h)(1)(A).	AFC Page 6.12-41	Yes	
Appendix B (h) (3)	The name, title, phone number, and address, if known, of an official within each agency who will serve as a contact person for the agency.	AFC Page 6.12-43	Yes	
Appendix B (h) (4)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.	AFC Page 6.12-43	Yes	

Adequacy Issue: Adequate **X** Inadequate **X**

# DATA ADEQUACY WORKSHEET

Revision No. 01 Date ~~October 22, 2001~~  
November 26, 2001

Technical Area: **Public Health**

Project: Avenal Energy Project

Technical Staff: Alvin Greenberg

Project Manager: Jim Mckinney

Docket: 01-AFC-20

Technical Senior: Mike Ringer

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	Sec. 6.16.2 Sec. 6.16.3.1 Sec. 6.16.3.2 Sec. 6.2.5 Sec. 6.16.4 Sec. 6.16.5 Sec. 6.16.6 Appendix 6.2-4	Yes	
Appendix B (g) (9) (A)	A list of all toxic substances emitted by the project under normal operating conditions, which may cause an adverse public health impact as a result of acute, chronic, or sub-chronic exposure and to which members of the public may be exposed. This list should include, at a minimum, any pollutants emitted by the project that are listed pursuant to Health and Safety Code § 25249.8.	Table 6.16-3	Yes	
Appendix B (g) (9) (B)	A protocol describing the analysis which the applicant will conduct to determine the extent of potential public exposure to substances identified in subsection (g)(9)(A) resulting from normal facility operation. The analysis itself can be submitted after the AFC is complete.	Sec. 6.16.1	Yes	
Appendix B (g) (9) (C)	A map at a scale of 1:24,000, showing all terrain areas exceeding the elevation of the stack within a 10 mile radius of the facility.	Figure 2.1-2	Yes no	<del>Please provide a map at a scale of 1:24000 showing all terrain areas exceeding the elevation of the stack within a 10 mile radius of the facility.</del>
Appendix B (g) (9) (D)	A map at a scale of 1:24,000, showing the distribution of population and sensitive receptors within the area exposed to the substances identified in subsection (g)(9)(A).	Figure 6.16-1 Figure 6.16-2 Sec. 6.16-1	Yes	

Adequacy Issue: Adequate **X** Inadequate **X**

# DATA ADEQUACY WORKSHEET

Revision No. 01 Date ~~October 22, 2001~~  
November 26, 2001

Technical Area: **Public Health**

Project: Avenal Energy Project

Technical Staff: Alvin Greenberg

Project Manager: Jim Mckinney

Docket: 01-AFC-20

Technical Senior: Mike Ringer

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (h) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, and permits applicable to the proposed project, and a discussion of the applicability of each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed;	Table 6.2-14 Sec. 6.16.7	Yes	
Appendix B (h) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	Table 6.2-10 Sec. 6.2.4.1 Sec. 6.2.4.2	Yes	
Appendix B (h) (2)	A discussion of the conformity of the project with the requirements listed in subsection (h)(1)(A).	Sec. 6.2.4 Sec. 6.2.5 Sec. 6.2.6 Table 6.2-14	Yes	
Appendix B (h) (3)	The name, title, phone number, and address, if known, of an official within each agency who will serve as a contact person for the agency.	Table 6.2-10	Yes	
Appendix B (h) (4)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.		N/A	

Adequacy Issue: Adequate ☒ Inadequate ☐

## DATA ADEQUACY WORKSHEET

Revision No. 01 Date December 3, 2001

Technical Area: Transmission System Eng.

Project: Avenal Energy project

Technical Staff: Ajoy Guha, P. E.

Project Manager: Jim McKinney

Docket: 01-AFC-20

Technical Senior: Al McCuen

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (i) (2) (A)	A discussion of the need for the additional electric transmission lines, substations, or other equipment, the basis for selecting principal points of junction with the existing electric transmission system, and the capacity and voltage levels of the proposed lines, along with the basis for selection of the capacity and voltage levels.	Section 1.5.3 , Page 1.5-3 Section 2.4, Page 2-89	Yes	
Appendix B (i) (2) (B)	A discussion of the extent to which the proposed electric transmission facilities have been designed, planned, and routed to meet the transmission requirements created by additional generating facilities planned by the applicant or any other entity.		N/A	
Appendix B (b) (2) (C)	A detailed description of the design, construction, and operation of any electric transmission facilities, such as power lines, substations, switchyards, or other transmission equipment, which will be constructed or modified to transmit electrical power from the proposed power plant to the load centers to be served by the facility. Such description shall include the width of rights of way and the physical and electrical characteristics of electrical transmission facilities such as towers, conductors, and insulators. This description shall include power load flow diagrams which demonstrate conformance or nonconformance with utility reliability and planning criteria at the time the facility is expected to be placed in operation and five years thereafter; and	<del>Section 2.4.5, Page 2-103</del> <del>Preliminary Interconnection Study Report, Appendix 6.18-2 (Confidential)</del> TSE Data Adequacy Responses dated Nov. 26, 2001 (Confidential) Pages 1-3	No Yes	Submit a System Impact Study for the first year operation of 600 MW generation interconnection performed by PG&E (optional) in summer peak and spring (off-peak) conditions, with the following provisions (refer to the preliminary interconnection study report):  Provide Power flow diagrams (MVA, % loading & per unit Voltages) for all N-0, N-1 and N-2 studies where overloads or voltage violations occur.  List mitigation measures considered (required) and those selected (Optional) for all criteria violations.  Analyze system for Transient Stability and Post-transient voltage conditions under critical N-1 and N-2 contingencies, and provide related plots, switching data and a list for voltage violations in the studies (Optional).  Analyze system for Fault currents and provide one table with fault currents before and after the interconnection and short circuit ratings of breakers in substations where fault currents will increase with the interconnection (Optional).  Provide electronic copies of *.sav and *.drw PSLE files for base cases & EPCL and/or AUTOCON contingency files (Optional).

Adequacy Issue: Adequate **X** Inadequate \_\_\_\_\_

## DATA ADEQUACY WORKSHEET

Revision No. 01 Date December 3, 2001

Technical Area: **Transmission System Eng.**

Project: Avenal Energy project

Technical Staff: Ajoy Guha, P. E.

Project Manager: Jim McKinney

Docket: 01-AFC-20

Technical Senior: Al McCuen

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (b) (2) (D)	A description of how the route and additional transmission facilities were selected, and the consideration given to engineering constraints, environmental impacts, resource conveyance constraints, and electric transmission constraints.	Section 2.4, Page 2-89 Section 5.5, Pages 5-16 to 5-19	Yes	
Appendix B (g) (18) (A)	The locations and a description of the existing switchyards and overhead and underground transmission lines that would be affected by the proposed project.	<del>Section 2.4, Page 2-89</del> <del>Section 5.5, Pages 5-16 to 5-19</del> TSE Data Adequacy Responses dated Nov 26, 2001 ( Confidential) Pages 3-4	<del>No</del> Yes	<del>Provide a full description of downstream facilities requiring reconductoring or other modifications. For their environmental settings and impacts, provide routes and detail environmental analysis and any recommended mitigation measures.</del>
Appendix B (g) (18) (B)	An estimate of the existing electric and magnetic fields from the facilities listed in (A) above and the future electric and magnetic fields that would be created by the proposed project, calculated at the property boundary of the site and at the edge of the rights of way for any transmission line. Also provide an estimate of the radio and television interference that could result from the project.		N/A	
Appendix B (g) (18) (C)	Specific measures proposed to mitigate identified impacts, including a description of measures proposed to eliminate or reduce radio and television interference, and all measures taken to reduce electric and magnetic field levels.		N/A	

Adequacy Issue: Adequate **X** Inadequate \_\_\_\_\_

## DATA ADEQUACY WORKSHEET

Revision No. 01 Date December 3, 2001

Technical Area: **Transmission System Eng.**

Project: Avenal Energy project

Technical Staff: Ajoy Guha, P. E.

Project Manager: Jim McKinney

Docket: 01-AFC-20

Technical Senior: Al McCuen

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (h) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, and permits applicable to the proposed project, and a discussion of the applicability of each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed;	Section 2.5, Tables 2.5-1 to 2.-4, Pages 2-104 to 2-108	Yes	
Appendix B (h) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	Section 2.5, Pages 2-104 to 2-114	Yes	
Appendix B (h) (2)	A discussion of the conformity of the project with the requirements listed in subsection (h)(1)(A).		Yes	
Appendix B (h) (3)	The name, title, phone number, and address, if known, of an official within each agency who will serve as a contact person for the agency.		Yes	
Appendix B (h) (4)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.	<del>Section 2.4.5, Page 2-103</del> Data Adequacy Response dated Nov 20 , 2001 Pages 13-14	<del>No</del> Yes	<del>Indicate when preliminary approval from California Independent System Operator will be obtained on completion of the System Impact study by PG&amp;E.</del>



Adequacy Issue: Adequate **X** Inadequate

## DATA ADEQUACY WORKSHEET

Revision No. 1 Date November 30, 2001, 2001

Technical Area: **Visual Resources**

Project: Avenal Energy

Technical Staff: Eric Knight

Project Manager: Jim McKinney

Docket: 01-AFC-20

Technical Senior: Dale Edwards

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	Pages 6.13-33 – 6.13-60; Sections 6.13.7 – 6.13.11  Pages 2-89 and 2-103; Figure 2.4-8; Section 2.4	Yes	
Appendix B (g) (6) (A)	Descriptions of the existing visual setting of the vicinity of the project, the region that can be seen from the vicinity of the project, and the proposed project site. Include:	Pages 6.13-3 – 6.13-10; Section 6.13.2  Page 6.13-22; Section 6.13.4	Yes	
Appendix B (g) (6) (A) (i)	Topographic maps at a scale of 1:24,000 of the areas from which the project may be seen, identification of the view areas most sensitive to the potential visual impacts of the project, and the locations where photographs were taken for (g)(6)(E);	Figure 6.13-22	Yes	
Appendix B (g) (6) (A) (ii)	Elevations of any existing structures on the site; and		N/A	
Appendix B (g) (6) (A) (iii)	The visual properties of the topography, vegetation, and any modifications to the landscape as a result of human activities.	Pages 6.13-3 – 6.13-10; Section 6.13.2  Page 6.13-22; Section 6.13.4	Yes	
Appendix B (g) (6) (B)	An assessment of the visual quality of those areas that will be impacted by the proposed project.	Pages 6.13-33 – 6.13-53; Section 6.13.7	Yes	

Adequacy Issue: Adequate **X** Inadequate

## DATA ADEQUACY WORKSHEET

Revision No. 1 Date November 30, 2001, 2001

Technical Area: **Visual Resources**

Project: Avenal Energy

Technical Staff: Eric Knight

Project Manager: Jim McKinney

Docket: 01-AFC-20

Technical Senior: Dale Edwards

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (6) (C)	After discussions with staff and community residents who live in close proximity to the proposed project, identify the scenic corridors and any visually sensitive areas potentially affected by the proposed project, including recreational and residential areas. Indicate the approximate number of people using each of these sensitive areas and the estimated number of residences with views of the project. For purposes of this section, a scenic corridor is that area of land with scenic natural beauty, adjacent to and visible from a linear feature, such as a road, or river.	Pages 6.13-33 – 6.13-53; Section 6.13.7 Figure 6.9-2	Yes	
Appendix B (g) (6) (D)	A description of the dimensions, color, and material of each major visible component of the project.	Page 6.13-12; Table 6.13-1 Draft DA Submittal	<del>No</del> Yes	<del>Please provide a description of the color and material of each major visible component of the project.</del>
Appendix B (g) (6) (E)	Full-page color photographic reproductions of the existing site, and full-page color simulations of the proposed project in the existing setting from each location representative of the view areas most sensitive to the potential visual impacts of the project.	Figures 6.13-24 – 6.13-30	Yes	
Appendix B (g) (6) (F)	An assessment of the visual impacts of the project, including light and glare, and visible plumes.	Page 6.13-18; Sections 6.13.3.5 – 6.13.3.6 Page 6.13-59; Section 6.13.9.4 Draft DA Submittal	<del>No</del> Yes	<del>The AFC states (page 6.13-18) that there may be a few occasions during the year when visible plumes may be seen emanating from the HRSG stacks, but does not discuss what the visual impacts would be from the stack plumes. There is no discussion of the visible plumes that would emanate from the project's cooling tower. Please discuss the visual impacts of the cooling tower and HRSG stack plumes.</del>

Adequacy Issue: Adequate **X** Inadequate

## DATA ADEQUACY WORKSHEET

Revision No. 1 Date November 30, 2001, 2001

Technical Area: **Visual Resources**

Project: Avenal Energy

Technical Staff: Eric Knight

Project Manager: Jim McKinney

Docket: 01-AFC-20

Technical Senior: Dale Edwards

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (h) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, and permits applicable to the proposed project, and a discussion of the applicability of each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed;	Pages 6.13-60 - 6.13-61; Section 6.13.12  Pages 6.9-10 - 6.9-15; Tables 6.9-1 - 6.9-2	Yes	
Appendix B (h) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	Page 6.9-19; Table 6.9-4	Yes	
Appendix B (h) (2)	A discussion of the conformity of the project with the requirements listed in subsection (h)(1)(A).	Pages 6.13-60 – 6.13-61; Section 6.13.12.1  Pages 6.9-10 - 6.9-15; Tables 6.9-1 - 6.9-2	Yes	
Appendix B (h) (3)	The name, title, phone number, and address, if known, of an official within each agency who will serve as a contact person for the agency.	Page 6.9-17; Table 6.9-3 Draft DA Submittal	NoYes	<del>Please provide the name, title, phone number, and address of an official at the City of Avenal Public Works Department who will serve as a contact person for the agency.</del>
Appendix B (h) (4)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.		N/A	

at Adequacy Issue: Adequate ☒ Inadequate ☒

## DATA ADEQUACY WORKSHEET

Revision No. 10 Date 12.10.01 40.24.04

Technical Area: **Water Resources**

Project: Avenal Energy

Technical Staff: Lorraine White

Project Manager: Jim McKinney

Docket: 01-AFC-20

Technical Senior: Dick Anderson

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	Sect. 1.5.5, Page 1-10 & 1-15 Table 1.5-1, Page 1-8 Sect. 1.8.4, Page 1-19 to 1-20 Sect. 2, Page 2-1 to 2-114 Figures 2.1-4 & 2.1-5 Sect. 5.4, 5-8 to 5-16, & 5-31 Sect. 6.1.3, Page 6.1-3 Sect. 6.5, Page 6.5-1 to 6.5-33 Appendix 6.5-2, Page 1, 24 & Table 3 AFC Supplement, December 2001, Section regarding Soil & Water Resources.	NoYes	<del>Please describe the potential indirect effects of the proposed water supply, particularly those that may result from the proposed groundwater conservation efforts described on page 6.5-27.</del>  Additional information requirements specified below.
Appendix B (g) (14) (A)	All information required by the Regional Water Quality Control Board in the region where the project will be located to apply for:			
Appendix B (g) (14) (A) (i)	Waste Discharge Requirements; and		N/A	Project will employ a zero liquid wastewater discharge system.
Appendix B (g) (14) (A) (ii)	a National Pollutant Discharge Elimination System Permit.	Sect. 2.3.8, Pages 2-45 to 2-26, & Page 2-49 to 2-51 Sect. 6.5.2, Pages 6.5-21, 6.5-22, 6.5-25, & 6.5-26 Pages 6.14-6 to 6.14-16, Tables 6.14-2 & 6.14-3 Appendix 6.5-1	Yes	

at Adequacy Issue: Adequate ☒ Inadequate ☒

## DATA ADEQUACY WORKSHEET

Revision No. 10 Date 12.10.01 40.24.04

Technical Area: **Water Resources**

Project: Avenal Energy

Technical Staff: Lorraine White

Project Manager: Jim McKinney

Docket: 01-AFC-20

Technical Senior: Dick Anderson

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (14) (B)	A description of the hydrologic setting of the project. The information shall describe, in writing and on maps at a scale of 1:24,000, the chemical and physical characteristics of the following water bodies that may be affected by the proposed project:			
Appendix B (g) (14) (B) (i)	Ground water bodies and related geologic structures;	Figure 6.3-2 and 6.3-4 Sect. 6.5.1.3, Page 6.5-5 Figure 6.5-5 to Figure 6.5-8, Pages 6.5-13 to 6.5-19 Appendix 6.5-2	Yes	
Appendix B (g) (14) (B) (ii)	Surface water bodies; and	Sect. 6.5.1.1, Pages 6.5-2 to 6.5-3 Table 6.5-1, page 6.5-4  AFC Supplement, December 2001, Section regarding Soil & Water Resources.	No Yes	<del>Please provide information regarding the physical characteristics of the water from the San Luis Canal from which the project will obtain its water supplies (include flow rate, volumes, etc...).</del>
Appendix B (g) (14) (B) (iii)	Water inundation zones, such as the 100-year flood plain and tsunami run-up zones.	Pages 6.5-5 Figure 6.5-2, pages 6.5-9 AFC Supplement, December 2001, Section regarding Soil & Water Resources.	No Yes	<del>Please provide a description of the inundation areas depicted in Fig. 6.5-2.</del>
Appendix B (g) (14) (C)	A description of the water to be used and discharged by the project. This information shall include:			

at Adequacy Issue: Adequate ☒ Inadequate ☒

## DATA ADEQUACY WORKSHEET

Revision No. 10 Date 12.10.01 40.24.04

Technical Area: **Water Resources**

Project: Avenal Energy

Technical Staff: Lorraine White

Project Manager: Jim McKinney

Docket: 01-AFC-20

Technical Senior: Dick Anderson

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (14) (C) (i)	Source of the water and the rationale for its selection, and if fresh water is to be used for power plant cooling purposes, a discussion of all other potential sources and an explanation why these sources were not feasible;	Pages 2-44, 2-85 Pages 6.5-15 to 6.5-18, 6.5-24 Sect. 5.4, Page 5-8 to 5-76, p. 5-31 Appendix 6.5-3 AFC Supplement, December 2001, Section regarding Soil & Water Resources.	No Yes	<del>Please provide chemical and physical characteristics of "other water" sources identified on p. 2-4. Include in this response the rationale for its selection, when such water may be used and an analysis of impacts associated with its use.</del> <del>P. 2-85 and 6.5-21 state that construction water will come from existing wells. Please clarify the location of these wells and the rationale of use from those proposed for back-up supplies.</del>
Appendix B (g) (14) (C) (ii)	The physical and chemical characteristics of the source and discharge water;	Table 6.5-1, Page 6.5-2 to 6.5-5 Table 6.5-3, Page 6.5-17 & 6.5-15 Appendix 6.5-2, Table 2 AFC Supplement, December 2001, Section regarding Soil & Water Resources.	No Yes	<del>P. 2-85 and 6.5-21 state that construction water will come from existing wells. If different from those used for back-up supplies, please provide information on chemical and physical characteristics.</del> <del>Please provide information on the anticipated quality of the water to be directed to the feed storage tank (see p. 2-42) and zero liquid discharge system.</del>
Appendix B (g) (14) (C) (iii)	Average and maximum daily and annual water demand and waste water discharge for both the construction and operation phases of the project; and	Table 2.3-1, Page 2-41 Table 2.3-2 Section 2.3.7 Page 2-86 Table 6.5-4, Page 6.5-23 & 6.5-24 Appendix 2-8, Table 2-8-1	Yes	

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Project: Avenal Energy

Technical Staff: Lorraine White

Project Manager: Jim McKinney

Docket: 01-AFC-20

Technical Senior: Dick Anderson

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Appendix B (g) (14) (C) (iv)	A description of all facilities to be used in water conveyance, treatment, and discharge. Include a water mass balance diagram.	Pages 2-41 to 2-45 Figure 2.3-12, 2.1-3A Table 6.5-2, p. 6.5-15 Pages 6.5-22 Appendix 1-1 Appendix 2-1, Page 2-1-1 to 2-1-9 Appendix 2-7, 2-8 Appendix 6.5-2, Table 1 AFC Supplement, December 2001, Section regarding Soil & Water Resources.	No Yes	<del>Please provide a complete description of the zero liquid discharge system to be used at the Avenal facility including all equipment, processes and treatments. Include in this information the expected water quality of the effluent directed to the zero discharge system, expected volumes of solid waste and frequency of materials removed from the site.</del>  <del>Please provide a description of facilities required to convey source water to the site from the San Luis Canal and the anticipated route.</del>
Appendix B (g) (14) (D)	A description of pre-, and post-construction runoff and drainage patterns, including:	Sect. 2.3.17.2, Page 2-71 Figure 2.3-9, 2.3-10, 2.3-11 Figure 6.5-2, 6.5-9	Yes	
Appendix B (g) (14) (D) (i)	Precipitation and storm runoff patterns; and	page 2-71 Figure 2.3-9 & 2.3-10 Page 6.2-2 & 6.2-3 Page 6.4-1, 6.5-3 AFC Supplement, December 2001, Section regarding Soil & Water Resources.	No Yes	<del>Please provide information on precipitation patterns (i.e., average monthly rainfall, etc...). Only annual average information was provided.</del>
Appendix B (g) (14) (D) (ii)	Drainage facilities and design criteria.	Figure 2.3-11, Page 2-77 Figure 2.3-9, Page 2-73 Pages 6.5-21 – 6.5-22, 6.5-26	Yes	

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Appendix B (g) (14) (E)	An assessment of the effects of the proposed project on water resources. This discussion shall include:			
Appendix B (g) (14) (E) (i)	The effects of project demand on the water supply and other users of this source;	Sect. 6.5.2, Page 6.5-21 to 6.5-29  Referenced material (see page 6.5-3),  Pages 6.5-23, 6.5-23  AFC Supplement, December 2001, Section regarding Soil & Water Resources.	No Yes	<del>Please provide a project specific assessment of the impacts associated with using surface water from the San Luis Canal. This assessment should include, but not be limited to, an evaluation of impacts (direct, indirect and cumulative) on the San Luis Canal, other users of the Canal resources, change in the time of use, impacts associated with the actual exchange/transfer of the resource for this purpose (a project specific environmental analysis/assessment was not provided in the referenced materials), etc...</del>  Provide more clarity of the relationship between the projects analyzed in the referenced materials and this proposed project.
Appendix B (g) (14) (E) (ii)	The effects of construction activities and plant operation on water quality; and	Pages 2-86  Sect. 6.5.2.1, Pages 6.5-21 to 6.5-23  AFC Supplement, December 2001, Section regarding Soil & Water Resources.	No Yes	<del>Please discuss what is meant by "suitable quality" and the criteria used to make this determination.</del>
Appendix B (g) (14) (iii)	The effects of the project on the 100-year flood plain or other water inundation zones.	Page 6.5-22 & 6.5-26	Yes	



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Appendix B (h) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, and permits applicable to the proposed project, and a discussion of the applicability of each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed;	Table 2.5-1, Page 2-106 Table 6.5-6, Page 6.5-30 AFC Supplement, December 2001, Section regarding Soil & Water Resources.	No Yes	<del>Please identify the Department of Water Resources and or SWRCB requirements and needed approval(s) for the proposed water exchange and provide required information related to this information (see Appendix 6.5-3).</del>
Appendix B (h) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	Table 2.5-5, Page 2-112 Table 6.5-6, Page 6.5-30 AFC Supplement, December 2001, Section regarding Soil & Water Resources.	No Yes	<del>Please identify the Department of Water Resources and SWRCB as it relates to the applicable requirements and needed approval(s) for the proposed water exchange and provide required information related to this information.</del>
Appendix B (h) (2)	A discussion of the conformity of the project with the requirements listed in subsection (h)(1)(A).	Page 6.5-18 to 6.5-21 Page 6.5-28 to 6.5-30 Table 6.5-6, Page 6.5-30 AFC Supplement, December 2001, Section regarding Soil & Water Resources.	No Yes	<del>Please discuss the conformity of the proposed project with the requirements and approvals required by the Department of Water Resources for the proposed water exchange.</del>
Appendix B (h) (3)	The name, title, phone number, and address, if known, of an official within each agency who will serve as a contact person for the agency.	Table 2.5-5, Page 2-112 Table 6.5-7, Page 6.5-31 AFC Supplement, December 2001, Section regarding Soil & Water Resources.	No Yes	<del>Please provide specified information for the appropriate contact(s) at DWR.</del>

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Appendix B (h) (4)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.	Page 2-72 Figure 2.5-1, Page 2-114 AFC Supplement, December 2001, Section regarding Soil & Water Resources.	No Yes	<del>Please provide a schedule for obtaining the required DWR approvals.</del>